Fig.1A
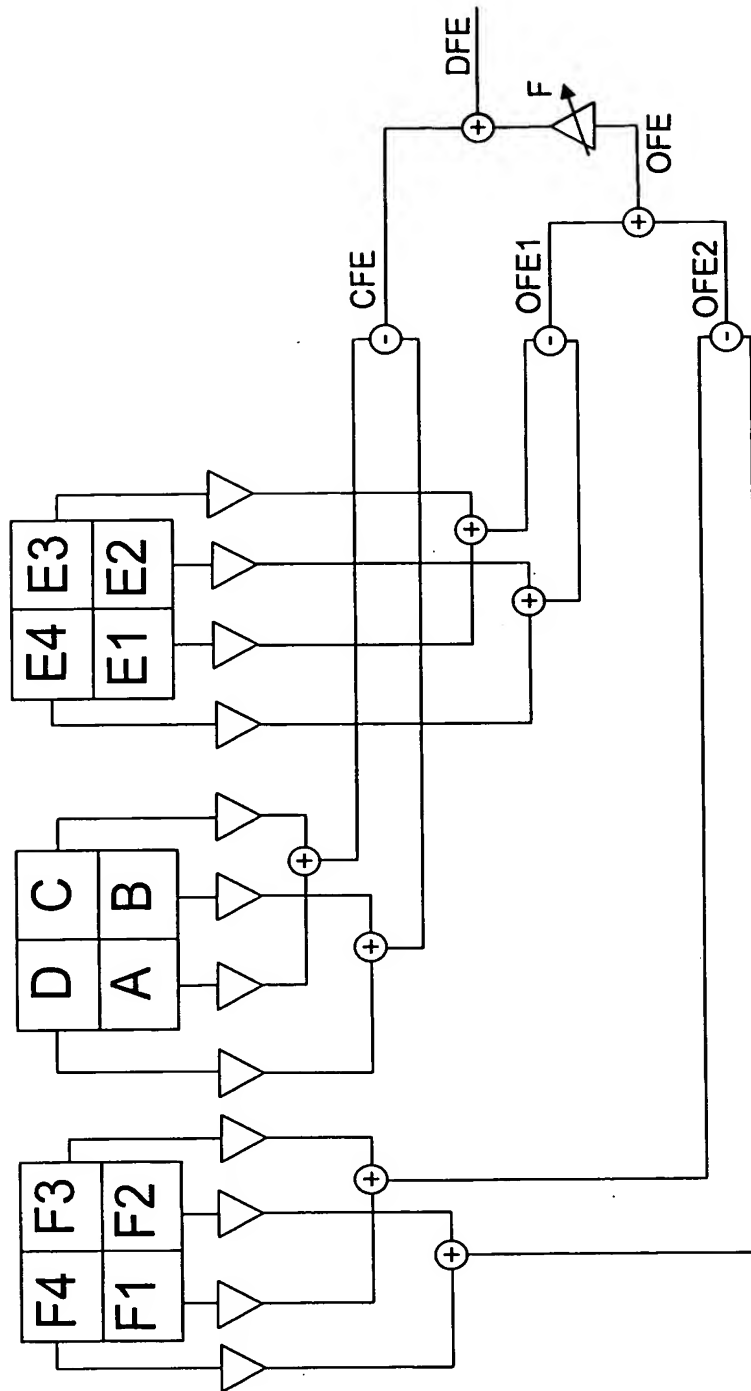
$CPP = (A+D) - (B+C)$

$OPP1 = E1 - E2$

$OPP2 = F1 - F2$

$DPP = CPP - T \cdot (OPP1 + OPP2)$

Fig.2A

$CFE = (A+C) - (B+D)$

$OFE1 = (E1+E3) - (E2+E4)$

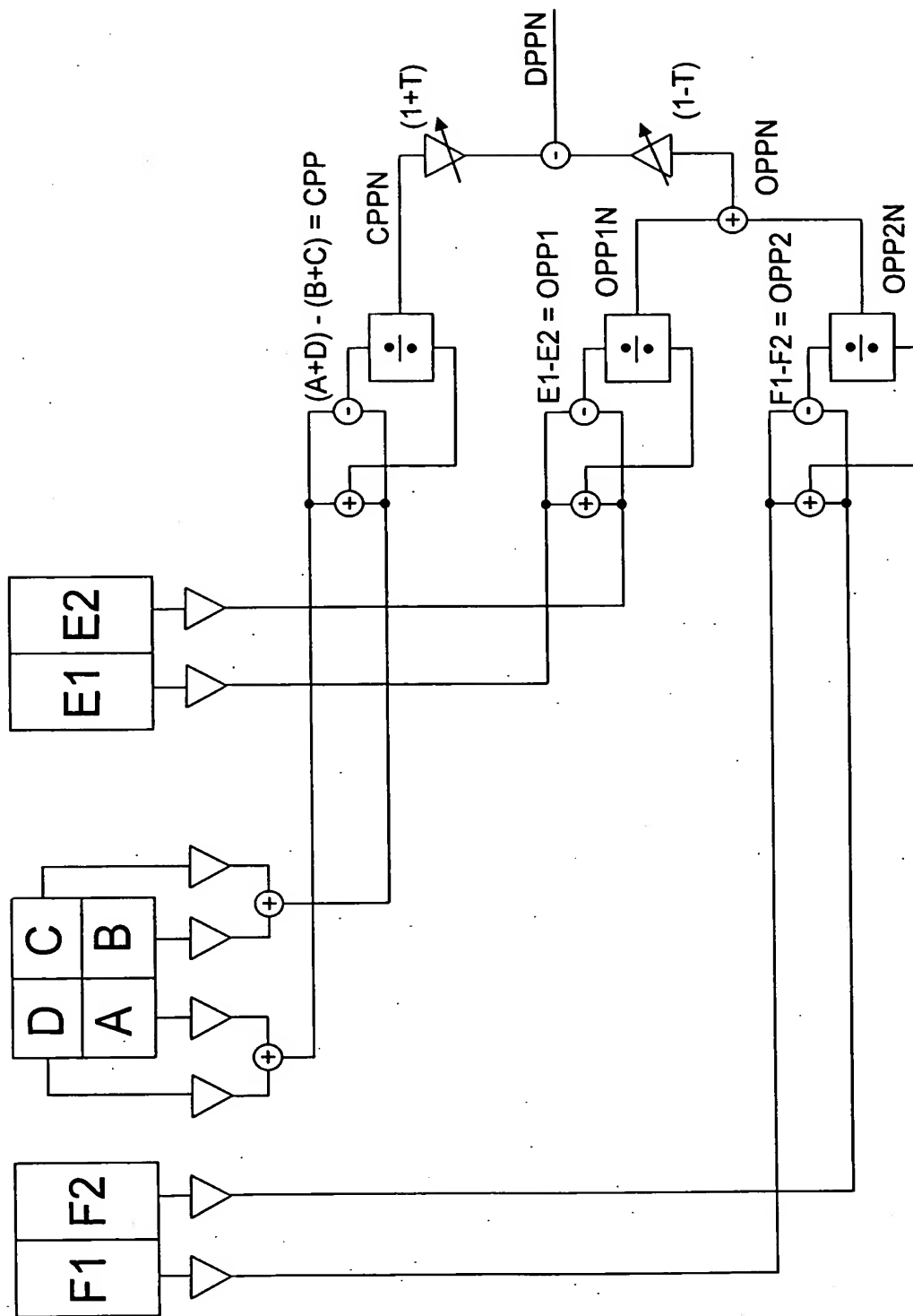$OFE2 = (F1+F3) - (F2+F4)$
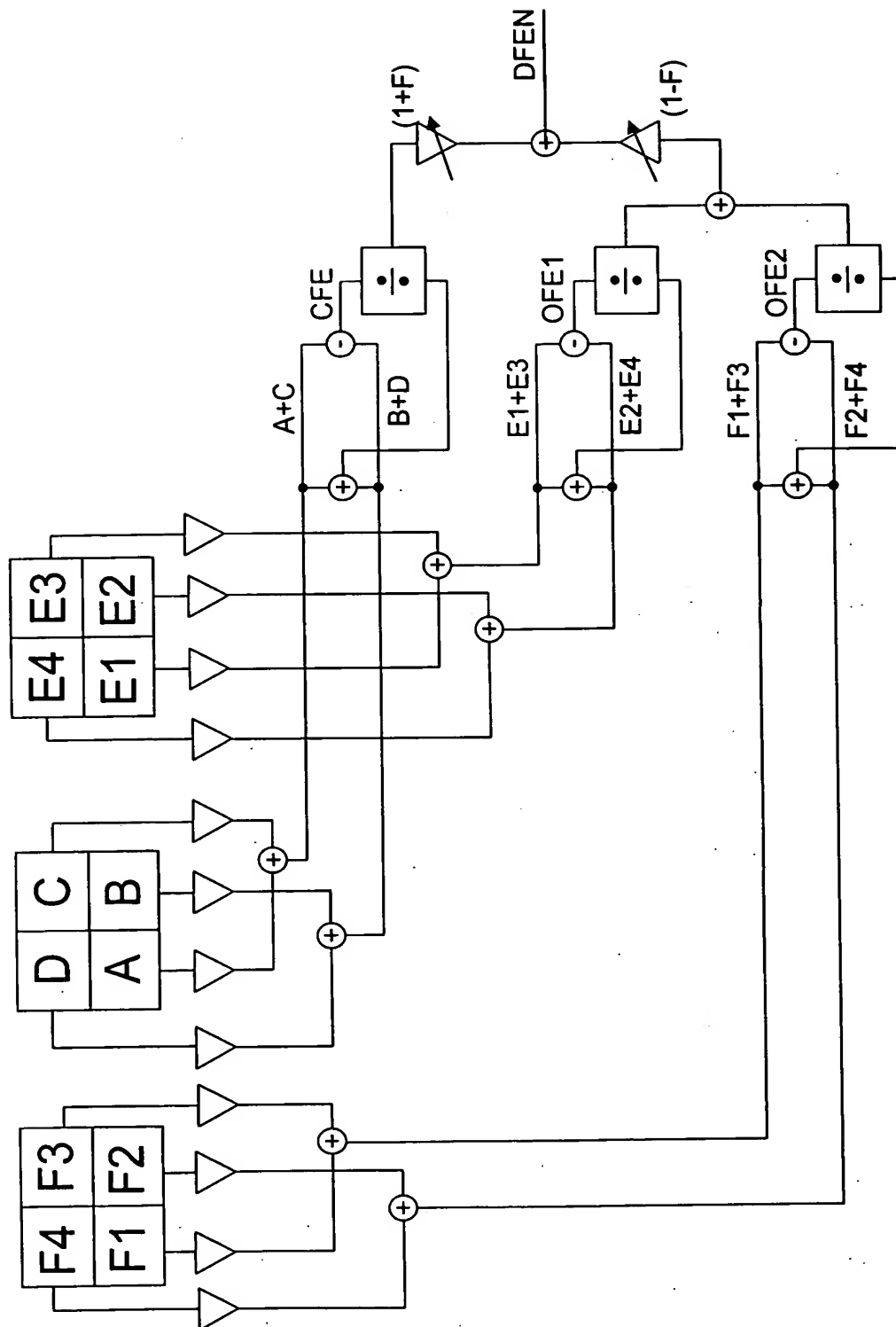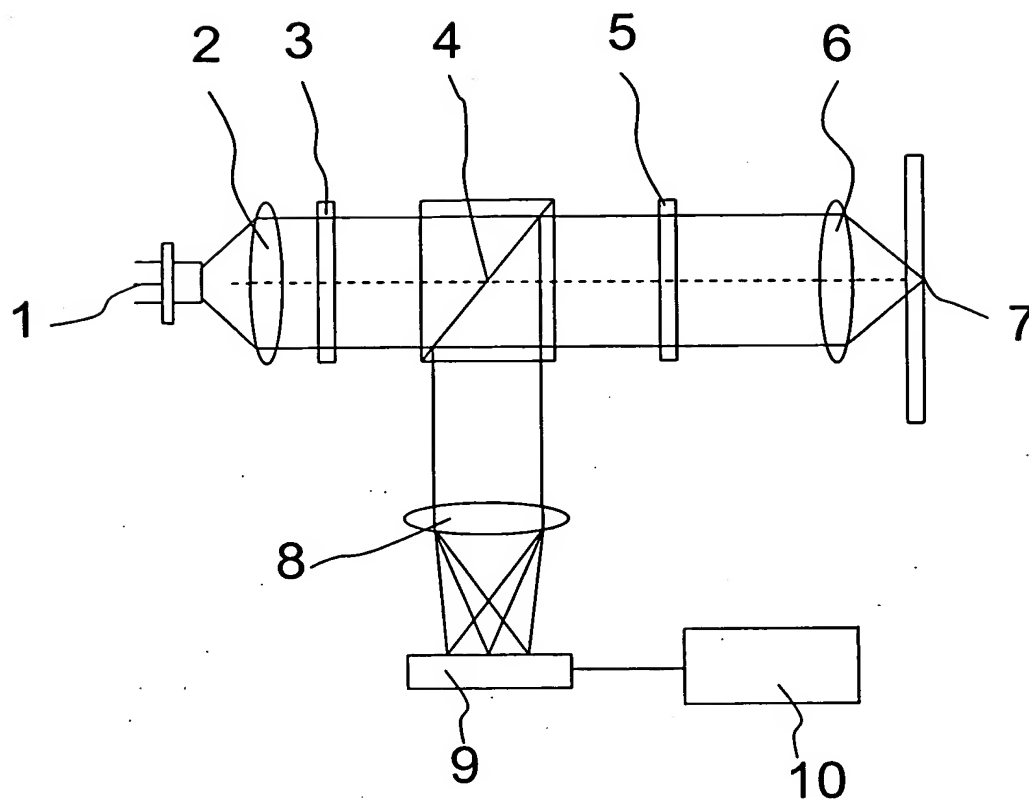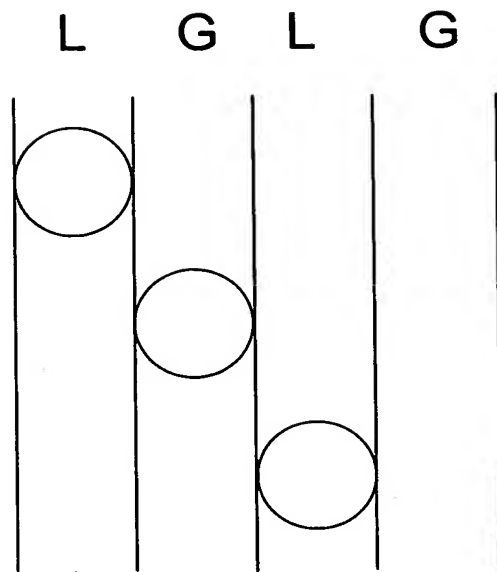
$DFE = CFE + F \cdot (OFE1+OFE2)$

Fig.1B

Fig.2B

2 3 4 5 6

1

7

8

9 10

Fig.3

L   G   L   G

Fig.4A

L   G   L   G

Fig.4B

L   G   L

| p |

$\Delta n = p$

Fig.5

x

FOCB

FOOB1   } 5A

FOOB2

FOOB = FOOB1 + FOOB2

} 5B

DFO = FOCB − K · FOOB; K = 0,5

DFE = FOCB + F · FOOB ; F = 0,5   5C

PD030051

L G L

| p |

$\Delta n = p$

X→

X→

X→

Fig.6

X→

FOCB

FOOB1

FOOB2

} 6A

FOOB = 0,5 • (FOOB1+FOOB2)

} 6B

DFO = FOCB – K • FOOB; K = 0,5

CPP

OPP1

OPP2

OPP = 0,5 • (OPP1+OPP2)

DPP = CPP – T • OPP; T = 0,5

6C

L   G   L
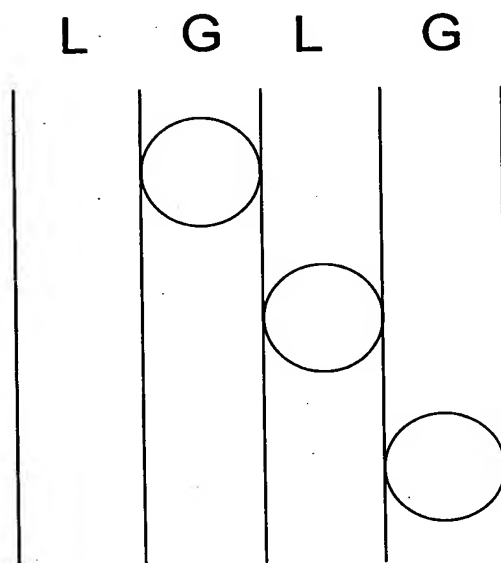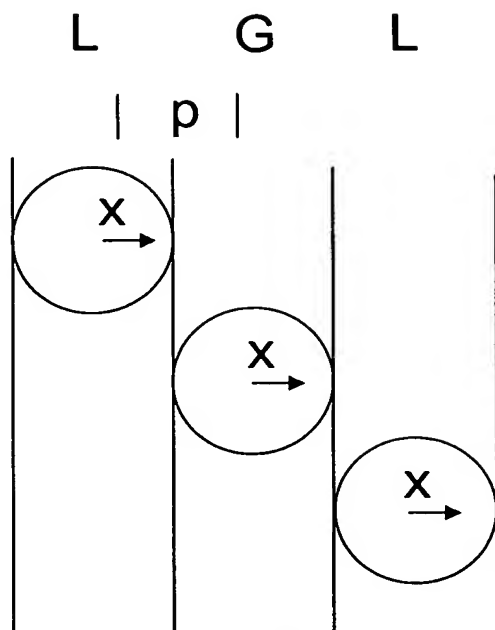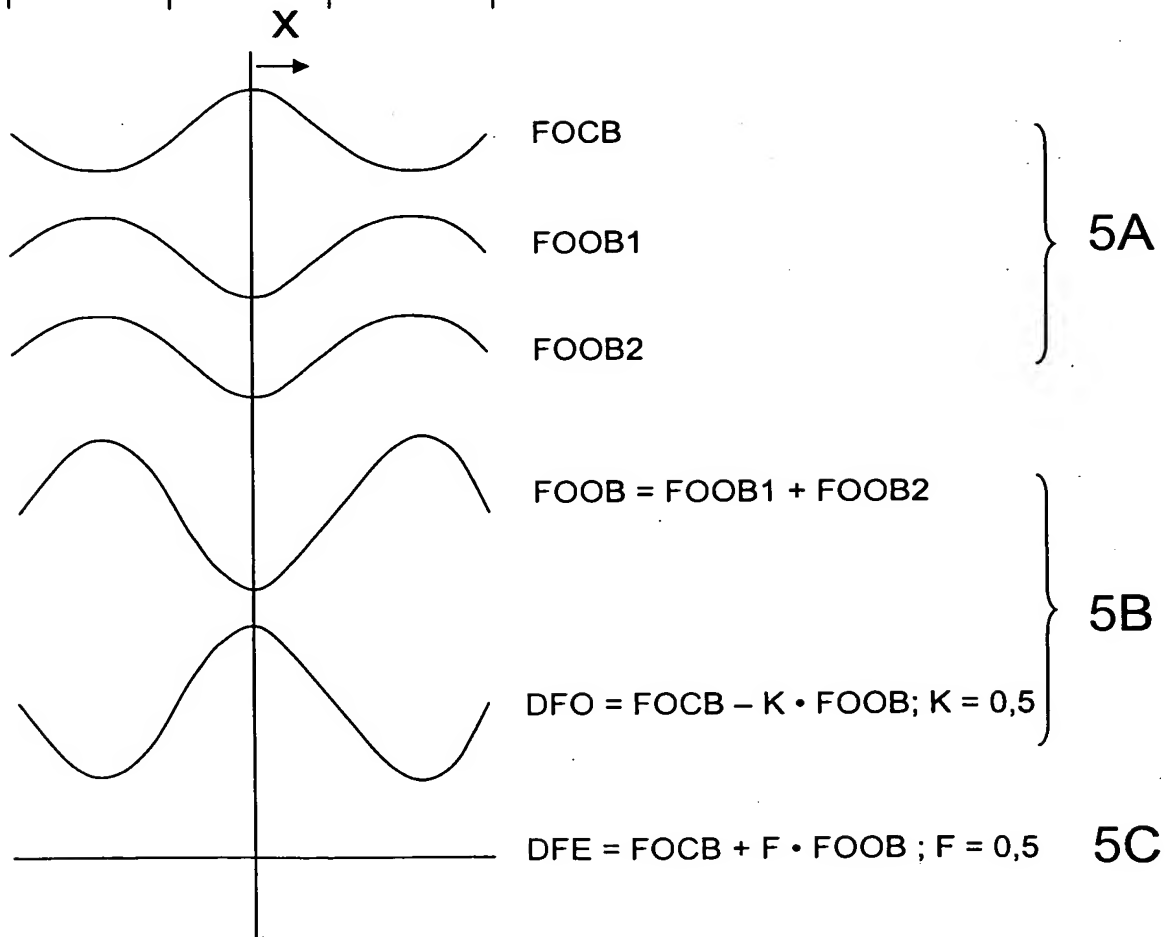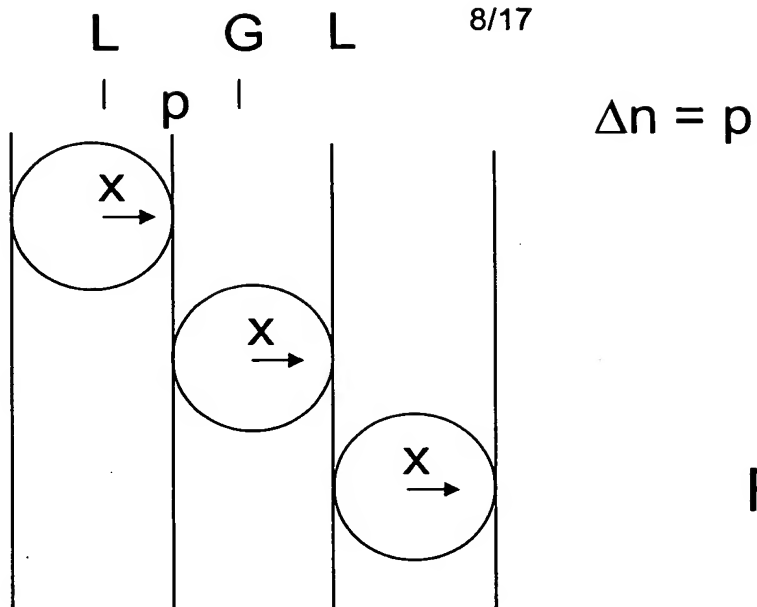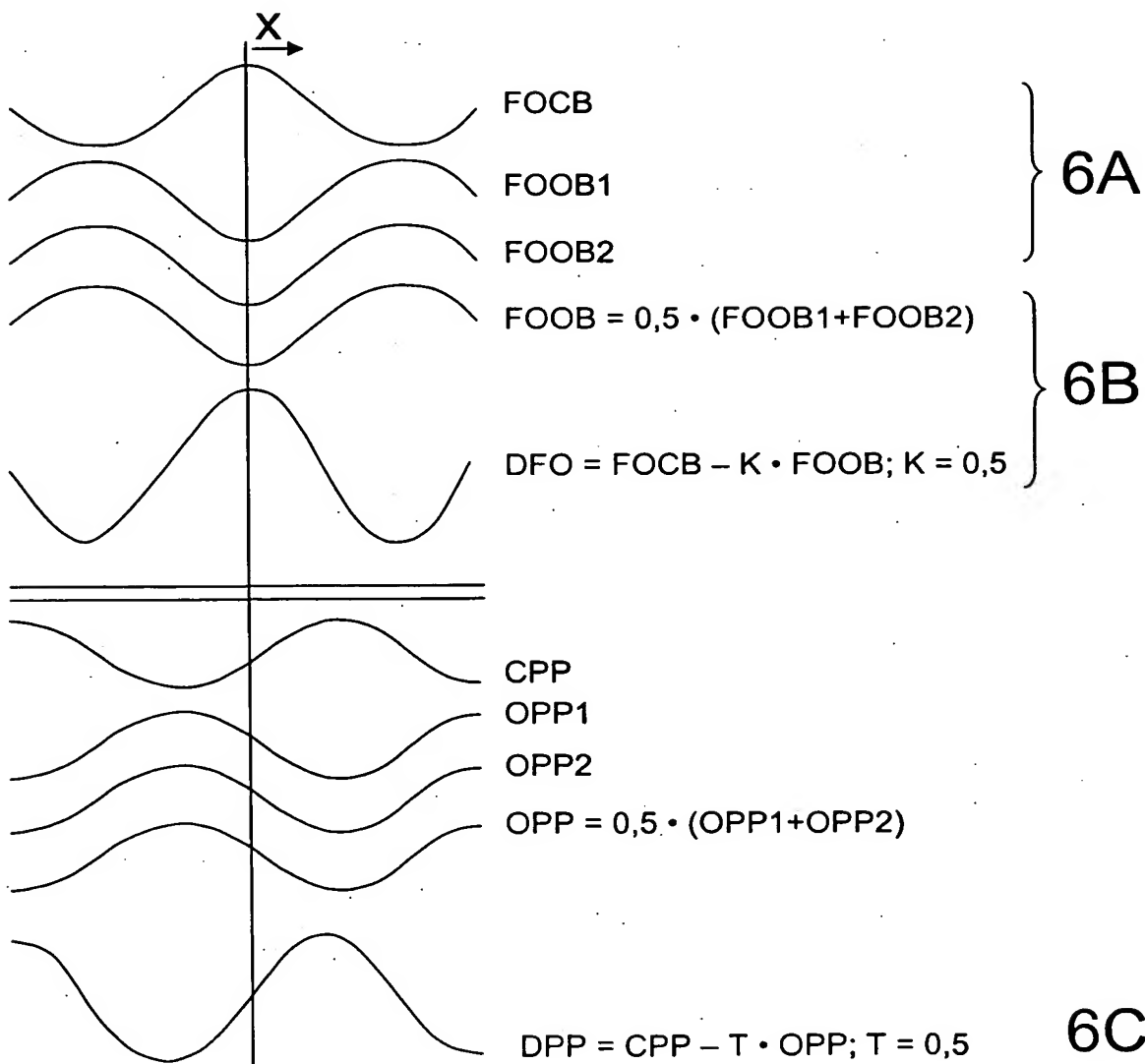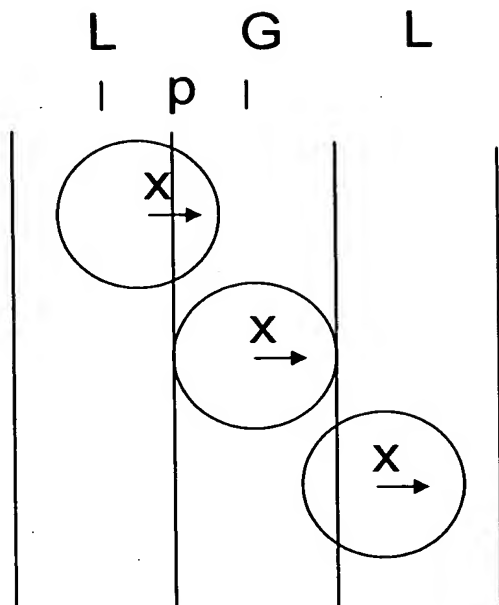
Δn = 3p/4

Fig.7

FOCB

FOOB1

FOOB2

} 7A

FOOB = FOOB1 + FOOB2

DFO = FOCB - K·FOOB; K=0,5

} 7B

CPP

OPP1

OPP2

OPP = OPP1 + OPP2

DPP = CPP – T·OPP; T=0,5

7C

L   G   L

| |← p →| |
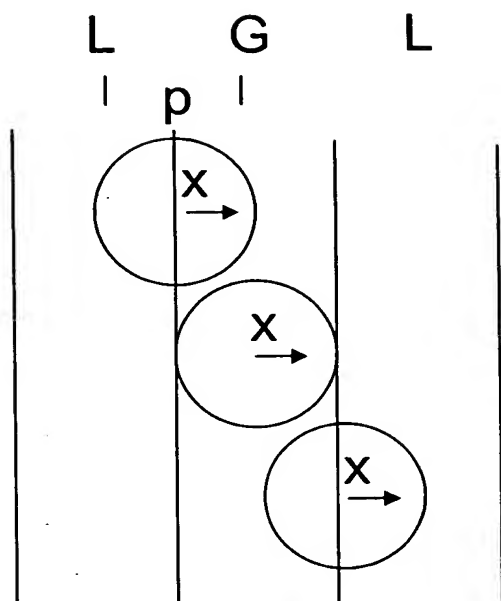
$\Delta n = p/2$

Fig.8

FOCB

FOOB1

FOOB2

} 8A

FOOB = FOOB1 + FOOB2

DFO = FOCB - K·FOOB; K=0,5

} 8B

CPP

OPP1

OPP2

OPP = OPP1 + OPP2

DPP = CPP – T·OPP; T=0,5

8C

n-1   n   n+1

DFO

DPP

L = 0   G = 1   L = 0   G / L

TZC

9B

9C

Fig.9

Fig.10

FC

AC

IC

DFO

1+K

1-K

CFE

A+C

B+D

OFE1 = (E1+E3)-(E2+E4)
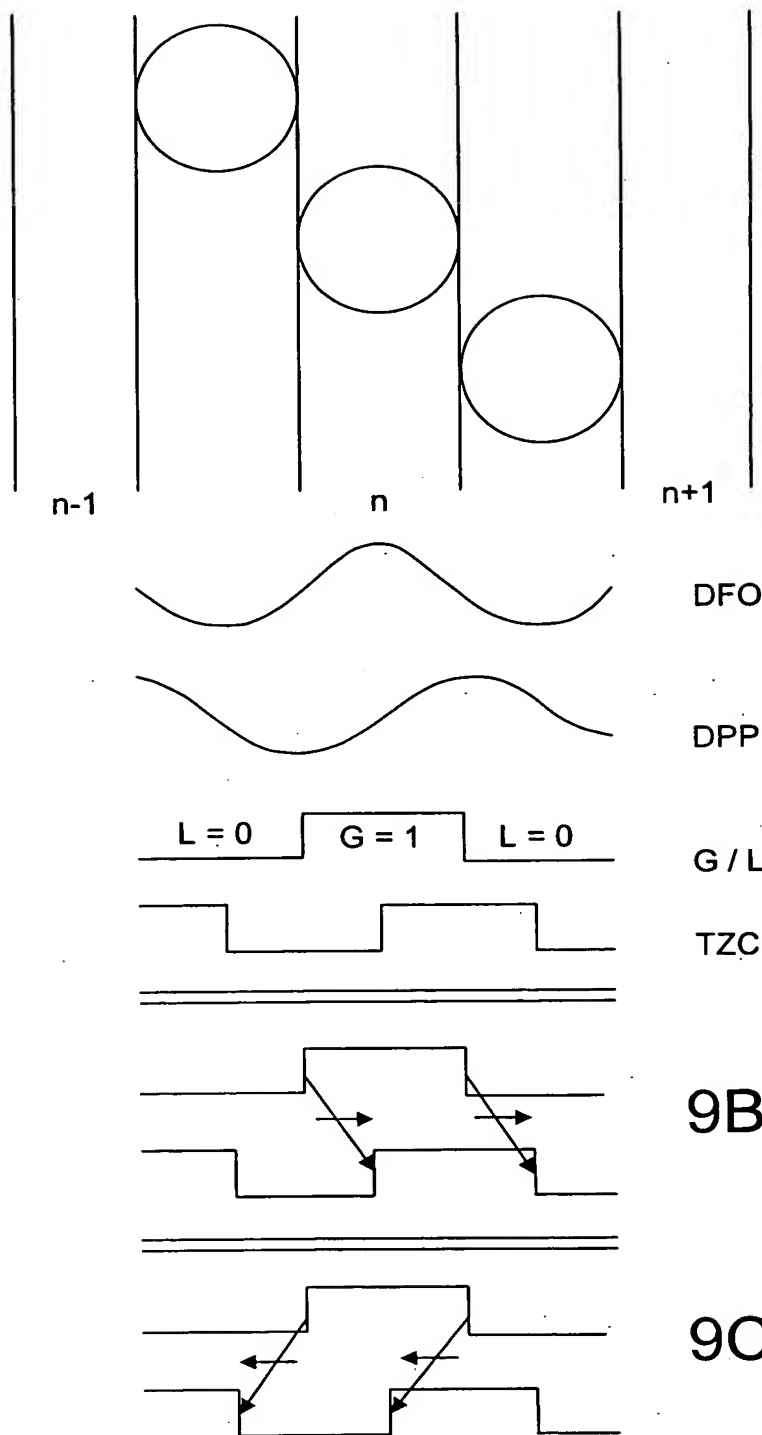
E1+E3

E2+E4

OFE2 = (F1+F3)-(F2+F4)

F1+F3

F2+F4

E4 | E3
E1 | E2

D | C
A | B

F4 | F3
F1 | F2
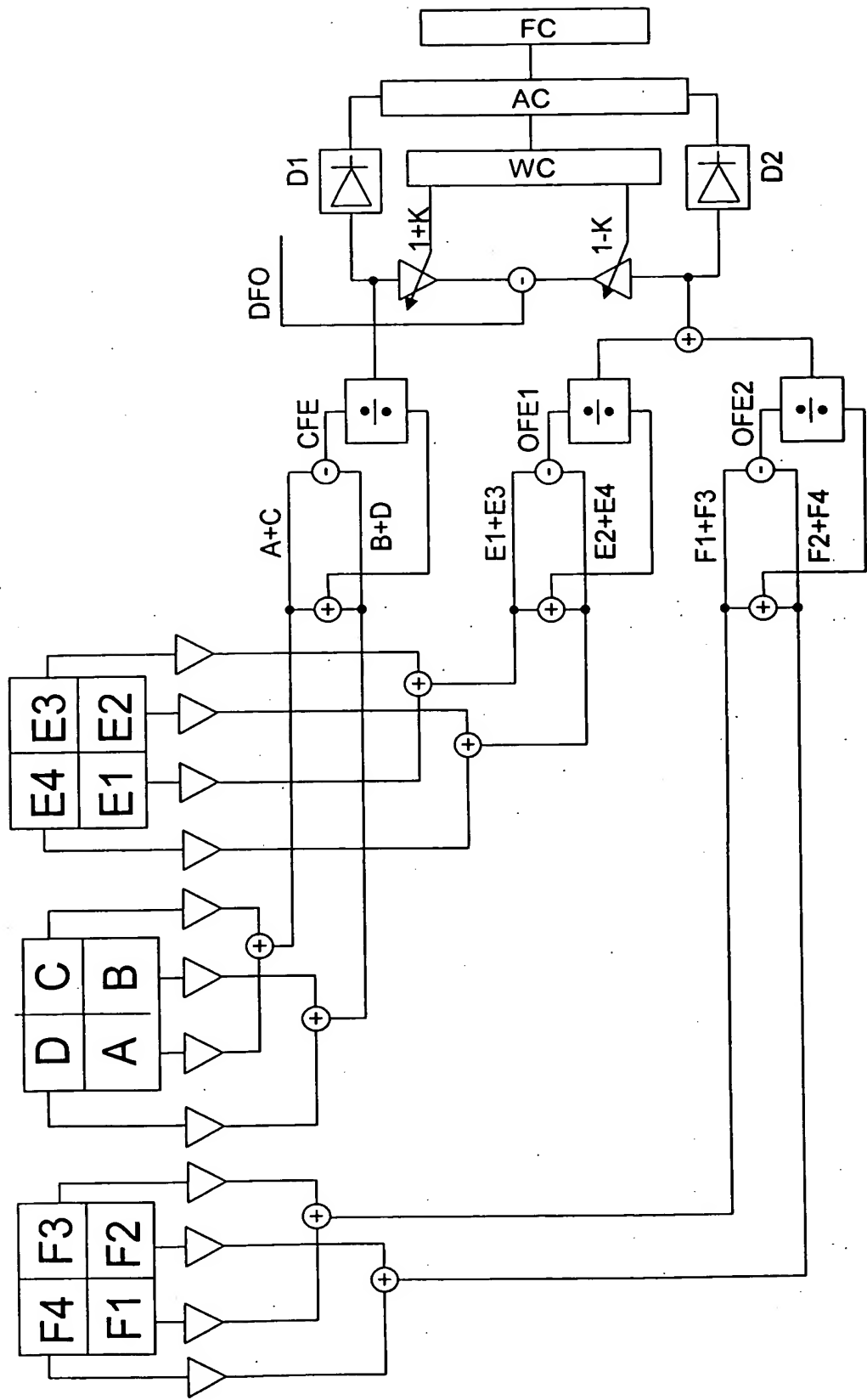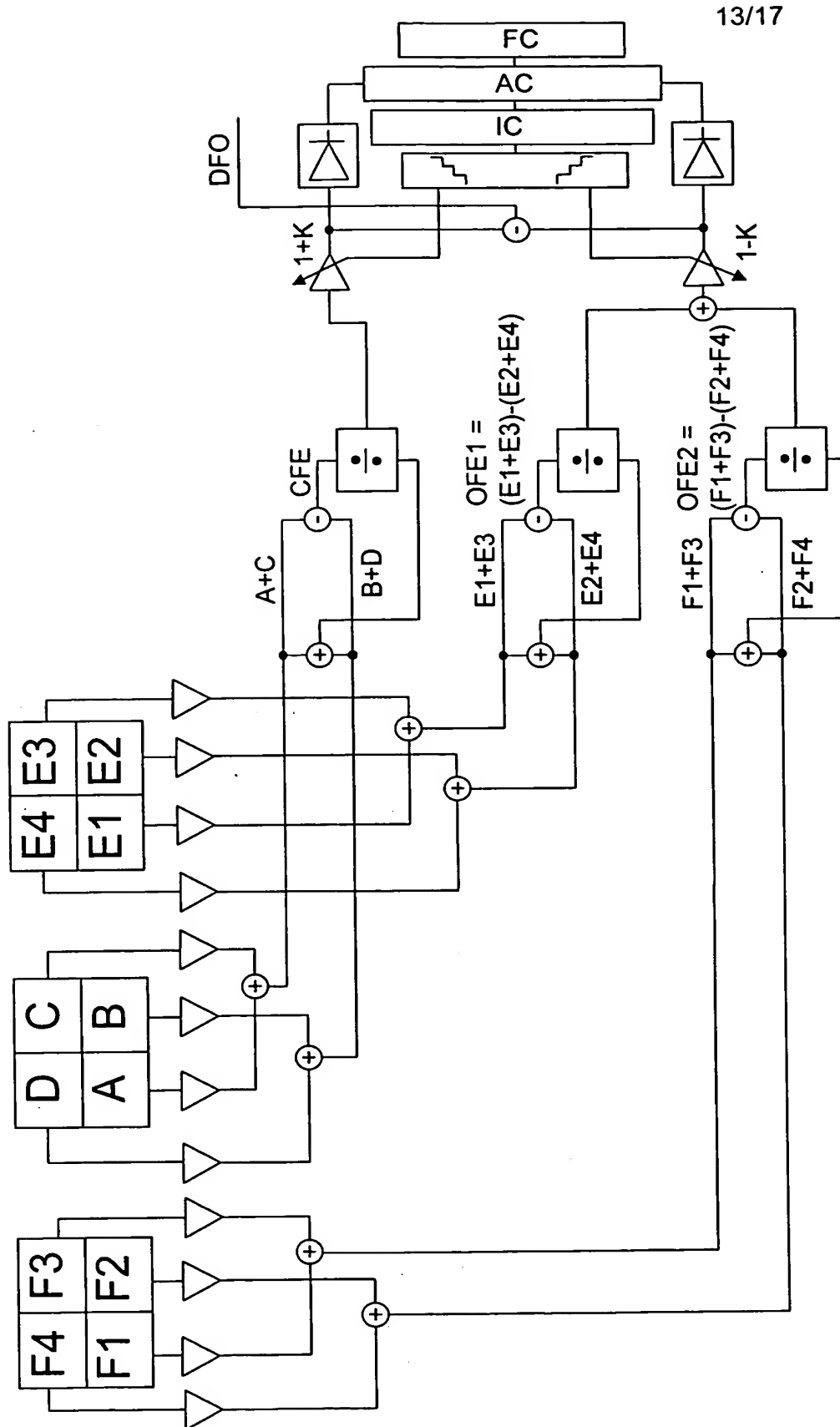
Fig.11

Fig.12

Fig.13A   Fig.13B

S

CFE

K•OFE

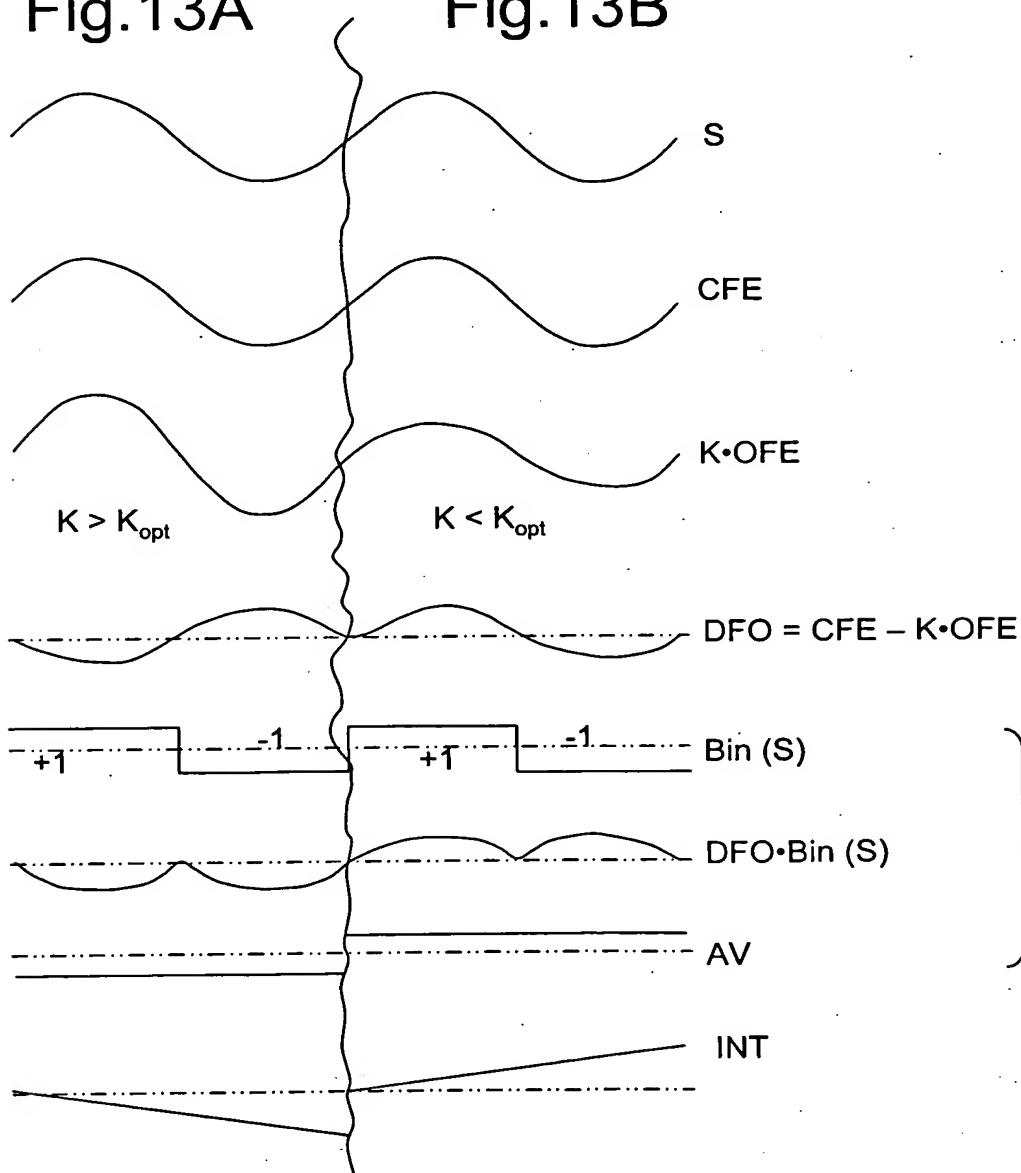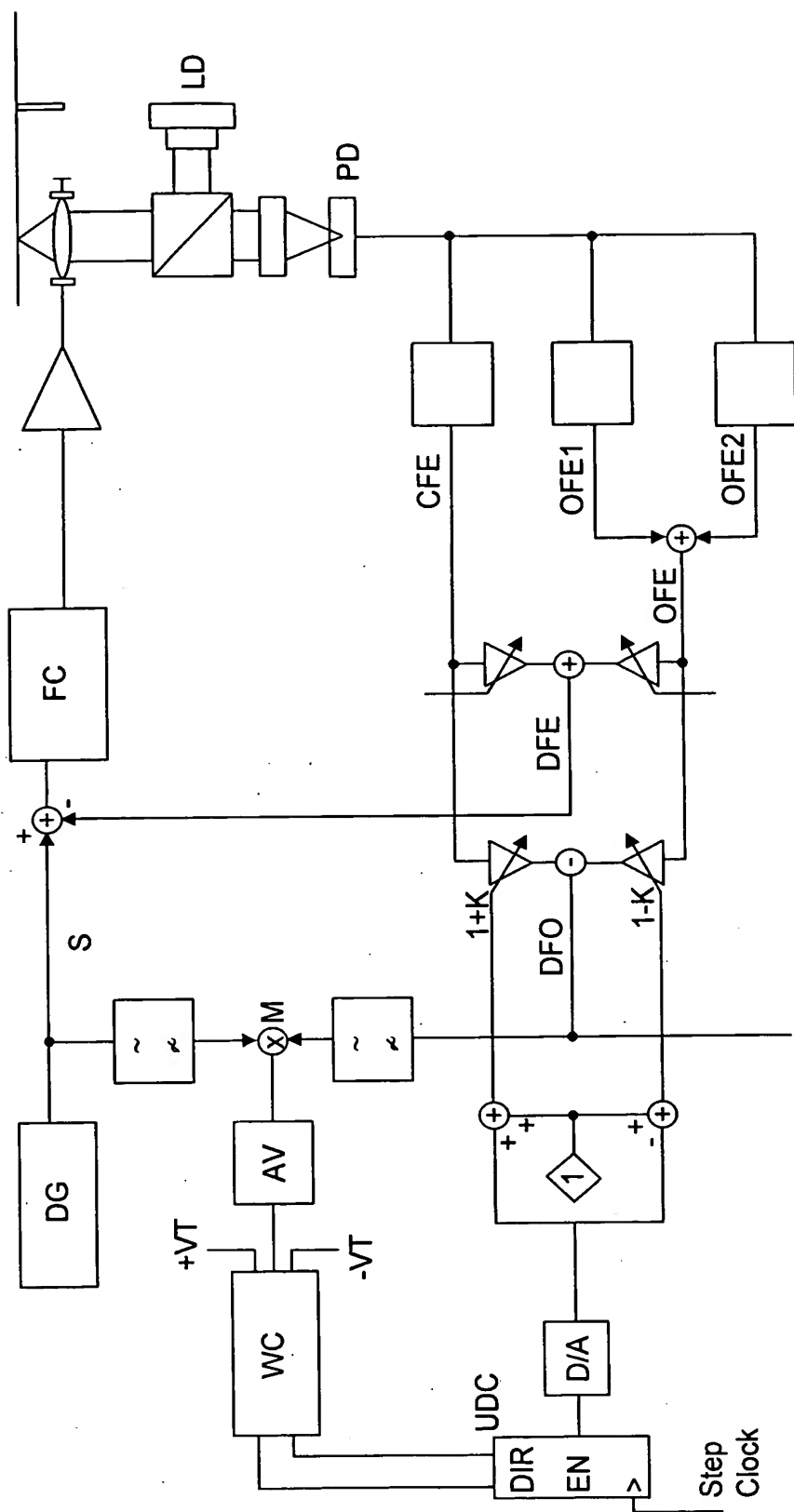$K > K_{opt}$ $K < K_{opt}$

DFO = CFE − K•OFE

+1   −1   +1   −1   Bin (S)

DFO•Bin (S)

AV

} Fig.13C

INT
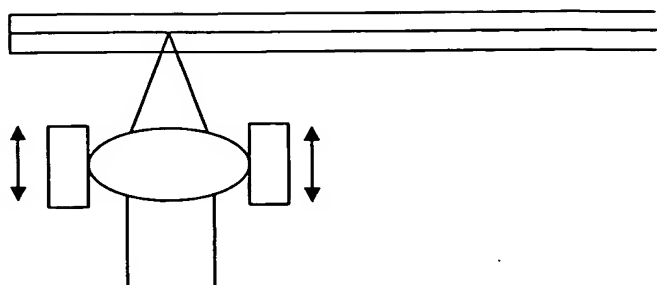
Fig.14A

Fig.14B

Fig.15

Fig.16